

A Potpourri of Pistachios

Those crunchy pistachios that make a perfect mid-afternoon snack are most likely to have come from Kerman pistachio trees, this country's most popular kind of commercial pistachio. Kerman trees, along with other domesticated pistachios and their unusual, wild, and rare relatives, thrive in America's official pistachio collection. This northern California orchard preserve, known as the ARS National Clonal Germplasm Repository for Fruit and Nut Crops, safeguards more than 750 pistachio trees.

Headquartered at Davis, California, the collection is part of a nationwide network of ARS-managed plant repositories established to protect the natural genetic diversity, or gene pool, of crop plants and their uncultivated cousins. Plant breeders, researchers, and others use these collections to develop new varieties or discover more about the lineage of existing ones.

The Davis collection includes 10 pistachio species and various hybrids from near and far. Among them: two species native to North America, *Pistacia mexicana* and *P. texana*; and exotic specimens from Afghanistan, China, Greece, India, Iran, Israel, Italy, Kazakhstan, Pakistan, Syria, Turkey, Turkmenistan, and Tunisia.

Cultivated pistachios like Kerman, many of which are different varieties of *P. vera*, bear their first crop at age 5 or 6, produce nuts only on female trees, and require pollen from nearby male pistachio trees to do so.

California: Top U.S. Producer

Some pistachio varieties in the collection, like Damghan, Iran Large, and Rashti—all *P. vera* types from Iran—bear nuts that are as large as, if not larger than, Kerman. But these varieties aren't as well suited as Kerman for growing in California, where most of America's 300-million-pound pistachio harvest is produced.

Nuts of wild pistachio species are considerably smaller than those of their domesticated cousins, according to ARS geneticist Mallikarjuna K. Aradhya, the Davis repository's crop manager for pistachios. An exception: domesticated *P. vera*'s closest wild relative, *P. khinjuk*, which produces nuts that vary from small to almost as big as those of Kerman.

Many kinds of pistachio trees that aren't cultivated for their nuts are instead used as rootstocks to which the upper, nut-bearing portion of the tree, or scion, is grafted. Or, these species are planted as street trees, especially those like *P. chinensis*, which has spectacular red and orange foliage in fall.

Besides being fun to eat, pistachio nuts are a boon to our health. They provide fiber; vitamins B1, thiamin, and B6; magnesium; phosphorus; and copper; plus smaller amounts of vitamins A, B9 (folate), and E; and calcium, iron, potassium,

selenium, and zinc. The nuts also contain lutein, thought to help eye health, and beta-sitosterol, which may help reduce cholesterol.—By **Marcia Wood**, ARS.

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Photo by Scott Bauer.
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